

SEQUENCE LISTING

5 (1) GENERAL INFORMATION:

(i) APPLICANT:

- (A) NAME: Zeneca MOGEN
- (B) STREET: Einsteinweg 97
- (C) CITY: Leiden
- (E) COUNTRY: The Netherlands
- (F) POSTAL CODE (ZIP): 2333 CB
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15 (ii) TITLE OF INVENTION: New constitutive plant promoters

(iii) NUMBER OF SEQUENCES: 22

20 (iv) COMPUTER READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)

25 (vi) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: EP 97203912.7
- (B) FILING DATE: 12-DEC-1997

30 (2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 520 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

35 (ii) MOLECULE TYPE: DNA (genomic)

40 (iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

GACTGAAGTG	TGAAGGTGGA	GATTATGTAT	TCACCTGTTG	ATTTGGTATA	CATTCTATGT	60
50 AAGGTTCAAT	TATTTACGTT	ATATAATTAT	AATGGAGTAA	TTTACAGTAA	TTGGGTTAAA	120
ATGGTTTGAT	TCGGTCAGGT	TGATACGGTT	TGGAAGTTAA	ACCCGGCCTA	GATATGATGT	180
TACAACCAGT	CCACATCTTT	TATGATTTA	GTGGAACAAA	CGAAGAGTTA	TTTAGACGAT	240
55 ACAAAACAAGG	TCCGAATAAG	TGTGAGCTGT	CCCAAGTAAG	ACCACGTAAT	ACTCACCTCA	300
ACAAGATAGT	GTTCTTAAAG	TGTGTCAAAC	ACAATCACAC	ACACACAAAT	CATAAAACAC	360
60 AAAGACGATA	ATCCATCGAT	CCACAGAATA	GACGCCACGT	GGTAGATAAG	ATTCTCACTA	420
AAAAGTTCTC	ACCTTTAAAT	CTTTCTCCAC	GCCATTTCCA	CAAGCCTAA	TCCTCAAAAA	480
TCTCAACTT	ATCTCCAAA	ACACAAATCT	AGAAACCATG			520

(2) INFORMATION FOR SEQ ID NO: 2:

5 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 300 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: DNA (genomic)

15 (iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

20 CCCACTACAA TGAATTTGTT CGTGAACTAT TAGTTGCGGG CCTTGGCATC CGACTACCTC 60
TGCAGCAATA TTATATTCCC TGGGCCACC GTGAACCAA TTTGCCTAT TTATTCATTA 120
CCCCCATTAA CATTGAAGTA GTCATGATGG GCCTGCAGCA CGTTGGTGAG GCTGGCACAA 180
25 CTCATCCATA TACTTTCTGA CGGGATCGGC ACATTATTGT AGAAAACGCG GACCCACAGC 240
GCACTTTCCA AAGCGGTGCC GCGTCAGAAT GCGCTGGCAG AAAAAAATTA ATCCAAAAGT 300

30 (2) INFORMATION FOR SEQ ID NO: 3:

35 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 840 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: DNA (genomic)

45 (iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

50 GGATCCGAGC TTGCATGCC CCACTACAAT GAATTGTTG TGAACTATT AGTTGCGGGC 60
CTTGGCATCC GACTACCTCT CGCGCAATAT TATATTCCCT GGGCCACCG TGAAACCAAAT 120
TTCGCCTATT TATTCATTAC CCCCATTAAAC ATTGAAGTAG TCATGATGGG CCTGCAGCAC 180
55 GTTGGTGAGG CTGGCACAAAC TCATCCATAT ACTTTCTGAC CGGATCGGCA CATTATTGTA 240
GAAAACGCGG ACCCACAGCG CACTTTCAAAGCGGTGCCG CGTCAGAATG CGCTGGCAGA 300
AAAAAATTAAC TCCAAAAGTG ACTGAAGTGT GAAGGTGGAG ATTATGTATT CACTTGTGA 360
60 TTTGGTATAC ATTCTATGTA AGGTTCAATT ATTTACGTTA TATAATTATA ATGGAGTAAT 420
TTACAGTAAT TGGGTTAAAA TGGTTTGATT CGGTCAAGGTT GATACGGTTT GGAAAGTTAAA 480
65 CCCGGCCTAG ATATGATGTT ACAACCAGTC CACATCTTT ATGATTTAG TGGACAAAC 540

5 GAAGAGTTAT TTAGACGATA CAAACAAGGT CCGAATAAGT GTGAGCTGTC CCAAGTAAGA 600
 CCACGTAATA CTCACCTCAA CAAGATAGTG TTCTTAAAGT GTGTCAAACA CAATCACACA 660
 CACACAAATC ATAAAACACA AAGACGATAA TCCATCGATC CACAGAATAG ACGCCACGTG 720
 GTAGATAGGA TTCTCACTAA AAAGTTCTCA CCTTTAATC TTTCTCCACG CCATTTCCAC 780
 10 AAGCCATAAT CCTAAAAAT CTCAACTTTA TCTCCAAAA CACAAATCTA GAAACCATGG 840

(2) INFORMATION FOR SEQ ID NO: 4:

15 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 477 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

25 (iii) ANTI-SENSE: NO

30 (vi) ORIGINAL SOURCE:
 (A) ORGANISM: *Arabidopsis thaliana*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

35 GGATCCTGCA GCGATTCAT TTTAGATTCT CAAAAATATT CTCAGATGTG TGGGATTG 60
 GTAGAGTTA TGTTGCGTTG GCATGATTG AATAGTATGC AAGATTTTG AGATTTGCA 120
 40 TTCGTTCATG TGTGTATGTG TGATTGTAGC TTGATATGAT TTAACCTGTT AGTTAAATGT 180
 GCATAGACAA TAAGTAACAT ACGAAGCGAG TCACTAAGCA TAAGAGTCAA CTTGTTTG 240
 45 TGAAAAGATA TCACTTATGA TTTTCAATC ATTTAGCTT TTTTGTCACT TGAGCTTAAT 300
 GATTCTTCTG AAATTCGATT CTTTGTGG TTTATGTCAC ATTCTTTAGA ATTGAGAAC 360
 TAAGAAATGC TTACAGGATA TCGTGAAACT ATTCTTTAA GATAGCATGA TGCTTCTTT 420
 50 ATGATTCTAC AGTGGCTAAG TCATTTTTT TTTGTTCTAT TCTTTGTAGC ACCATGG 477

(2) INFORMATION FOR SEQ ID NO: 5:

55 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 29 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

60 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

65 AGATTTGTAT TGCAGCGATT TCATTTAG

(2) INFORMATION FOR SEQ ID NO: 6:

5 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA
(iii) HYPOTHETICAL: NO

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

ATCTGGTCAC AGAGCTTGTC

20

20 (2) INFORMATION FOR SEQ ID NO: 7:

25 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

30 (iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

35 GTCTCCATGG TGCTTACAAAG AATAG

25

40 (2) INFORMATION FOR SEQ ID NO: 8:

45 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

CGGGATCCTG CAGCGATTTC ATTTTAG

27

55 (2) INFORMATION FOR SEQ ID NO: 9:

60 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

65 (iii) HYPOTHETICAL: NO

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

ACATGAACGA ATGCAAAATC TC

22

(2) INFORMATION FOR SEQ ID NO: 10:

10 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

15 (ii) MOLECULE TYPE: cDNA
(iii) HYPOTHETICAL: NO

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

AGATTTGCA TTCGTTCATG TG

22

25 (2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

35 (iii) HYPOTHETICAL: NO

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

TGTAAGCATT TCTTAGATTC TC

22

(2) INFORMATION FOR SEQ ID NO: 12:

45 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 22 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

60 AAGAAATGCT TACAGGATAT GG

22

(2) INFORMATION FOR SEQ ID NO: 13:

65 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 34 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (vii) MOLECULE TYPE: cDNA

(viii) HYPOTHETICAL: NO

10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

GACAAGCTTG ATCCCAGGT GCTACAAAGA ATAG

34

15 (2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 31 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

25 (iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

30 AGTGGTACCA TCATAATACT CATCCTCCTT C

31

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 37 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

50 CGAAGCTTTA CAAATCTAAT TTCATCACTA AATCGGA

37

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 35 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

55 (ii) MOLECULE TYPE: cDNA

60 (iii) HYPOTHETICAL: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

65 GCTGCAATAC AAATCTAATT TCATCACTAA ATCGG

35

(1) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 876 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: *Arabidopsis thaliana*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

ATCATAATAC	TCATCCTCCT	TCTCAAGGTT	CGTACGTATT	ATCAATATCT	AGTATATACT	60	
TGTCTTGT	CTATGTTTA	TATCATCATT	TTATGACAAA	AAATGATTAA	GGTCTTAGTT	120	
25	AATGATTATG	TATATGTGAA	ACTTATATT	AGGGGCACAA	TTAATTCG	TATGATAATT	180
GTCTAGTTAG	CTTTATGTAC	TTATCATAAA	AACCTTAGTG	TTTATCGCAA	TACTTTCAA	240	
30	ATATAGTGTA	GAATCATAAT	GGTCCCAC	TCATTATGTT	TGATGCAAAT	CTATTTGGAT	300
TTTGTGGAT	AATAAACCGA	TGACGTGGAC	CAGACCAAGTA	GCTATAAGAT	TTGGTTAC	360	
35	TAGAAATTTT	TTATAAGATA	ATGTATCTAG	GTTCGTTAT	GATTATACAT	GTGATATT	420
ATACATGGCA	CAGGTTCGTC	GACTTCACA	GCCATAGGTA	CAATAGAAGG	CAAATTGAT	480	
TGTGGTTATC	TGGTAAAAGT	TAAGTTGGC	TCAGAGATT	TTAACGGCGT	TCTTTATCAT	540	
40	TCGGCCCAGC	CCGGCCCATC	ATCATCTCCA	ACCGCTGTT	TAAACAATGC	CGTTGTACCT	600
TATGTTGAAA	CTGGGAGGAG	ACGGCGTCGT	TTAGGTAAAA	GACGAAGAAG	CAGACCGAGA	660	
GAAGATCCGA	ATTACCCGAA	ACCGAACCGG	AGCGGTTACA	ATTTCTTCTT	TGCTGAGAAA	720	
45	CATTGCAAGC	TCAAATCACT	TTATCCCAAC	AAGGAGAGAG	AGTTTACGAA	ACTTATCGGA	780
GAATCGTGG	GCAATCTCTC	TACCGAAGAA	CGAATGGTAA	CAAATTATCT	TTTAAACCGT	840	
50	TACCGATT	GTGATGAAAT	TAGATTTGTA	GTAAAT			876

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 1357 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

GGATCCCCGG	GTACCATCAT	AATACTCATC	CTCCTCTCA	AGGTCGTAC	GTATTATCAA	60	
5	TATCTAGTAT	ATACTTGTCT	TTGTTCTATG	CTTTATATCA	TCATTTTATG	ACAAAAAATG	120
	ATTAAGGTCT	TAGTTAATGA	TTATGTATAT	GTGAAACTTA	TATTTAGGGG	CACAGTTAA	180
10	TTTCGTATGA	TAATTGTCTA	GTAGCTTTA	TGTACTTATC	ATAAAAACCT	TAGTGTAT	240
	CGCAATACCT	TTCAAAATATA	GTGTAGAATC	ATAATGGTCC	CACTGTCATT	ATGTTGATG	300
	CAAATCTATT	TGGATTTGT	TGGATAATAA	ACCGATGACG	TGGACCAGAC	CAGTAGCTAT	360
15	AAGATTTGGT	TCACATAGAA	ATTTTTATA	AGATAATGTA	TCTAGGTTG	CTTATGATTA	420
	TACATGTGAT	ATTTAATACA	TGGCACAGGT	TCGTCGAGTT	TCACAGCCAT	AGGTACAATA	480
20	GAAGGCAAAT	TCGATTGTGG	TTATCTGGTA	AAAGTTAAGT	TGGGCTCAGA	GATTCTAAC	540
	GGCGTTCTTT	ATCATTCCGC	CCAGCCCCGC	CCATCATCAT	CTCCAACCGC	TGTTCTAAC	600
	AATGCCGTTG	TACCTTATGT	TGAAACTGGG	AGGAGACGGC	GTCGTTAGG	TAAAAGACGA	660
25	AGAAGCAGAC	GCAGAGAAGA	TCCGAATTAC	CCGAAACCGA	ACCGGAGCGG	TTACAATTTC	720
	TTCTTTGCTG	AGAAACATTG	CAAGCTAAA	TCACTTTATC	CCAACAAGGA	GAGAGAGTTT	780
30	ACGAAACTTA	TCGGAGAATC	GTGGAGCAAT	CTCTCTACCG	AAGAACGAAT	GGTAACAAAT	840
	TATCTTTAA	ACCGTTACCG	ATTTAGTGAT	GAAATTAGAT	TTGTATTGCA	GGCATTTCAT	900
	TTTAGATTCT	CAAAAATATT	CTCAGATGTG	TGGGATTGTA	GTAGAGTTA	TGTTGCCTTG	960
35	GCATGTTG	AATAGTATGC	AAGATTTTG	AGATTTGCA	TCGTTCATG	TGTGTATGTG	1020
	TGATTGTAGC	TTGATATGAT	TTAACCTGTT	AGTTAAATGT	GCATAGACAA	TAAGTAACAT	1080
40	ACGAAGCGAG	TCACTAAGCA	TAAGAGTCAA	CTTGTGTTGC	TGAAAAGATA	TCACTTATGA	1140
	TTTTCGAATC	ATTTTAGCTT	TTTTGTCACT	TGAGCTTAAT	GATTCTCTG	AAATTCGATT	1200
	CTTTGTTGG	TTTATGTCAC	ATTCTTACA	ATTGAGAATC	TAAGAAATGC	TTACAGGATA	1260
45	TGGTGAACACT	ATTCTTTAA	GATAGCATGA	TGCTTCTTT	ATGATTCTAC	AGTGGCTAAG	1320
	TCATTTTTT	TTTGTCTAT	TCTTGTAGC	ACCATGG			1357

(2) INFORMATION FOR SEQ ID NO: 19:

50

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

60

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

65 GTCTTGTACA AATCTAATTT CATCACTAAA TCGG

34

(2) INFORMATION FOR SEQ ID NO: 20:

5 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 34 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

10 (ii) MOLECULE TYPE: cDNA

15 (iii) HYPOTHETICAL: NO

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

TTAGATTGT ACAAGACCT TCCTCTATAT AAGG

34

20 (2) INFORMATION FOR SEQ ID NO: 21:

20 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

25 (ii) MOLECULE TYPE: cDNA

30 (iii) HYPOTHETICAL: NO

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

35 TTCCCAGTCA CGACGTTGT

19

40 (2) INFORMATION FOR SEQ ID NO: 22:

40 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 1006 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

45 (ii) MOLECULE TYPE: DNA (genomic)

50 (iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

55 GGATCCCCGG GTACCATCAT AATACTCATC CTCCTTCTCA AGGTTCGTAC GTATTATCAA

60

TATCTAGTAT ATACTTGTCT TTGTTCTATG CTTTATATCA TCATTTTATG ACAAAAAAATG

120

60 ATTAAGGTCT TAGTTAATGA TTATGTATAT GTGAAACTTA TATTTAGGGG CACAGTTAA

180

TTTCGTATGA TAATTGTCTA GTTAGCTTA TGTACTTATC ATAAAAACCT TAGTGTAT

240

CGCAATACTT TTCAAATATA GTGTAGAATC ATAATGGTCC CACTGTCATT ATGTTGATG

300

65 CAAATCTATT TGGATTTGT TGGATAATAA ACCGATGACG TGGACCAGAC CAGTAGCTAT

360

AAGATTTGGT TGACATAGAA ATTTTTTATA AGATAATGTA TCTAGGTTG CTTATGATTA 420
5 TACATGTGAT ATTTATACA TGGCACAGGT TCGTCGAGTT TCACAGCCAT AGGTACAATA 480
GAAGGCAAAT TCGATTGTGG TTATCTGGTA AAAGTTAAGT TGGGCTCAGA GATTCTTAAC 540
GGCGTTCTTT ATCATTGCGC CCAGCCCGGC CCATCATCAT CTCCAACCGC TGTTCTAAAC 600
10 AATGCCGTTG TACCTTATGT TGAAACTGGG AGGAGACGGC GTCGTTTAGG TAAAAGACGA 660
AGAAGCAGAC GCAGAGAAGA TCGAATTAC CCGAAACCGA ACCGGAGCGG TTACAATTTC 720
15 TTCTTGCTG AGAAACATTG CAAGCTAAA TCACTTTATC CCAACAAGGA GAGAGAGTTT 780
ACGAAACTTA TCGGAGAATC GTGGAGCAAT CTCTCTACCG AAGAACGAAT GGTAACAAAT 840
TATCTTTAA ACCGTTACCG ATTTAGTGT GAAATTAGAT TTGTACAAGA CCCTTCCTCT 900
20 ATATAAGGAA GTTCATTTCA TTTGGAGAGG ACACGTATTT TTACAACAAT TACCAACAAAC 960
AACAAACAAC AAACAACATT ACAATTACTA TTTACAATTA CCATGG 1006